CES Environmental Services Hazardous Waste Site

By Jim Blackburn
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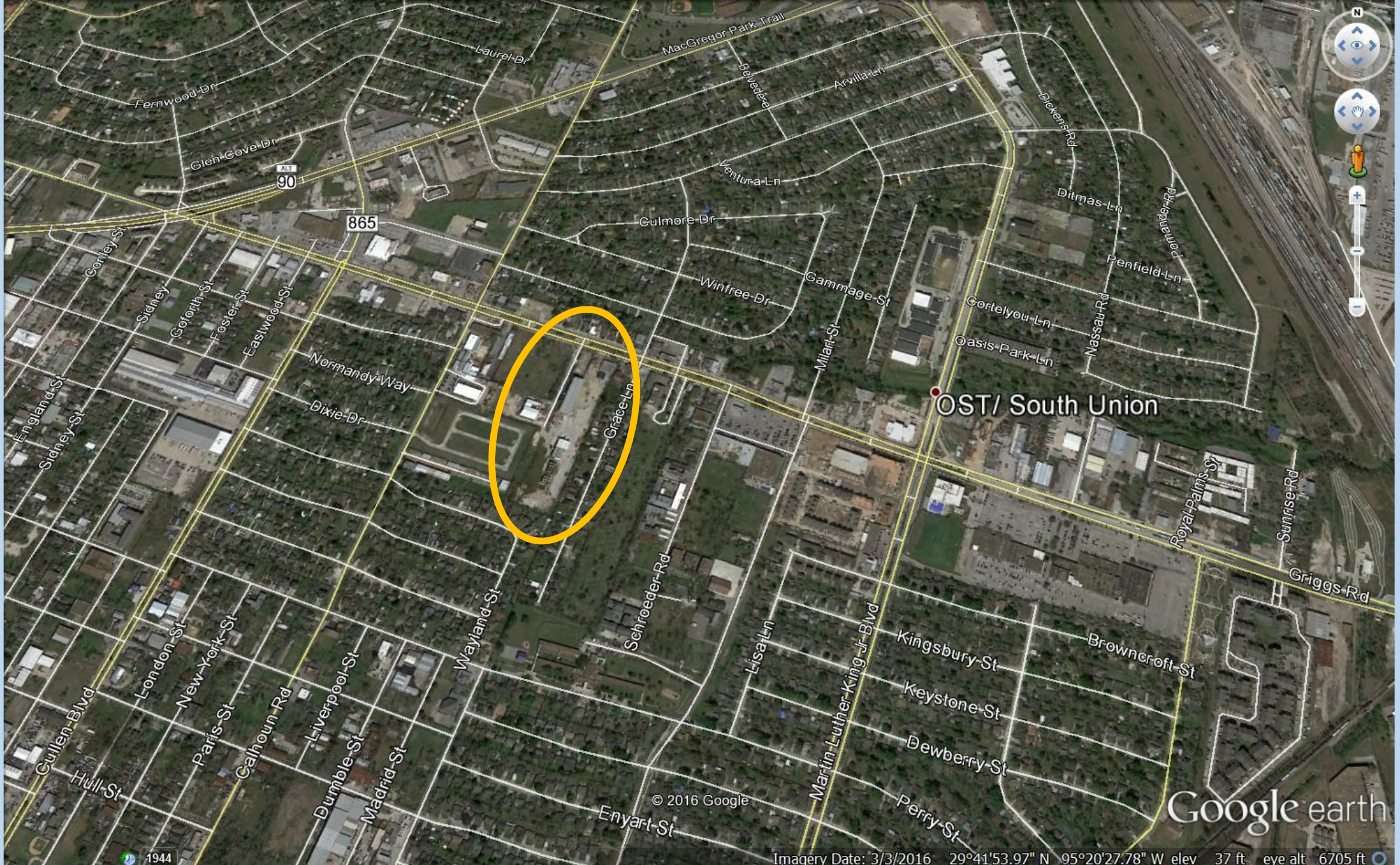
Civil and Environmental Engineering Department
July 5, 2016

Who I Am and Why I Am Here

- **Environmental Lawyer and Professor In the Practice of Civil Engineering at Rice University**
- **Volunteered to help Paul Charles determine the status and options for the community to take action about this site**
- **Here to make a short presentation and have a discussion with affected citizens about what could be done in the future**


MacGregor Park Trail
Laurel Dr
Fernwood Dr
Glen Cove Dr
ALT 90
865
Belvedere
Arvilla Ln
Dickens Rd
Ventura Ln
Culmore Dr
Ditmas Ln
Pomander Rd
Penfield Ln
Winfree Dr
Gammage St
Cortelyou Ln
Oasis Park Ln
Nassau Rd
Milam St
OST/ South Union
Conley St
Sidney
Goforth St
Foster St
Eastwood St
Normandy Way
Dixie Dr
Grace Ln
England St
Sidney St
Schroeder Rd
Wayland St
Royal Palms St
Sunrise Rd
Griggs Rd
Cullen Blvd
London St
New York St
Paris St
Calhoun Rd
Liverpool St
Dumble St
Madrid St
Hull St
Lisa Ln
Martin Luther King Jr Blvd
Kingsbury St
Browncroft St
Keystone St
Dewberry St
Perry St
Enyart St
© 2016 Google
Google earth
1944
Imagery Date: 3/3/2016 29°41'53.97" N 95°20'27.78" W elev 37 ft eye alt 6705 ft

EXPLANATION

Approx. Subject Property Boundary

N

Approx. Scale in Feet

0 100 200

Source:
Imagery taken from Google Earth, photography dated 4/8/2014.

CES ENVIRONMENTAL SERVICES
4904 GRIGGS ROAD
HOUSTON, TEXAS

Figure 2

SITE MAP

PROJECT: 4006	BY: AJD	REVISIONS
DATE: FEB., 2015	CHECKED: BB	

PASTOR, BEHLING & WHEELER, LLC
CONSULTING ENGINEERS AND SCIENTISTS

Timeline

- **June 2002 CES purchases 4904 Griggs Road –operated as an industrial and hazardous waste treatment facility**
- **5910 Wayland and 4900 Griggs purchased in 2006**
- **2005 to 2009 City of Houston responded to nuisance complaints**
- **Ben Hall Files Lawsuit 2009**
- **Bankruptcy August 2010**
- **Lawsuit settled in 2012**
- **Waste spillage 2014 led to EPA response action**
- **June 2015 site accepted into Voluntary Clean-up Program**
- **March 2016 PRP group site assessment report**
- **Next up – Response Action Plan (RAP)**

Elements of EPA 2014 Response Action

Removal of materials that had flowed off-site
Flushing storm sewers
Removed oily materials from on-site ponded areas
Construction of berms to prevent further releases off-site
Repair of Security Fences
Removal and disposal of more than 3000 tons of waste materials from tanks, sumps, roll-off boxes, drums, totes and other containers
Visibly contaminated soils were removed to eliminate sheen on storm water

Photos From EPA Site Clean-up

EXPLANATION

- Approx. Property Boundary
- PBW Sample Location - Phase I
- PBW Sample Location - Phase II
- PBW Monitoring Well Location

N

Scale in Feet

0 60 120

Source:
Imagery taken from www.tnris.gov, Harris County, TX 2013 photography.

CES GRIGGS ROAD VCP SITE
HOUSTON, TEXAS

Figure 1A

ON-SITE PROPERTY MAP

PROJECT: 4020	BY: AJD	REVISIONS
DATE: MARCH, 2016	CHECKED: BB	

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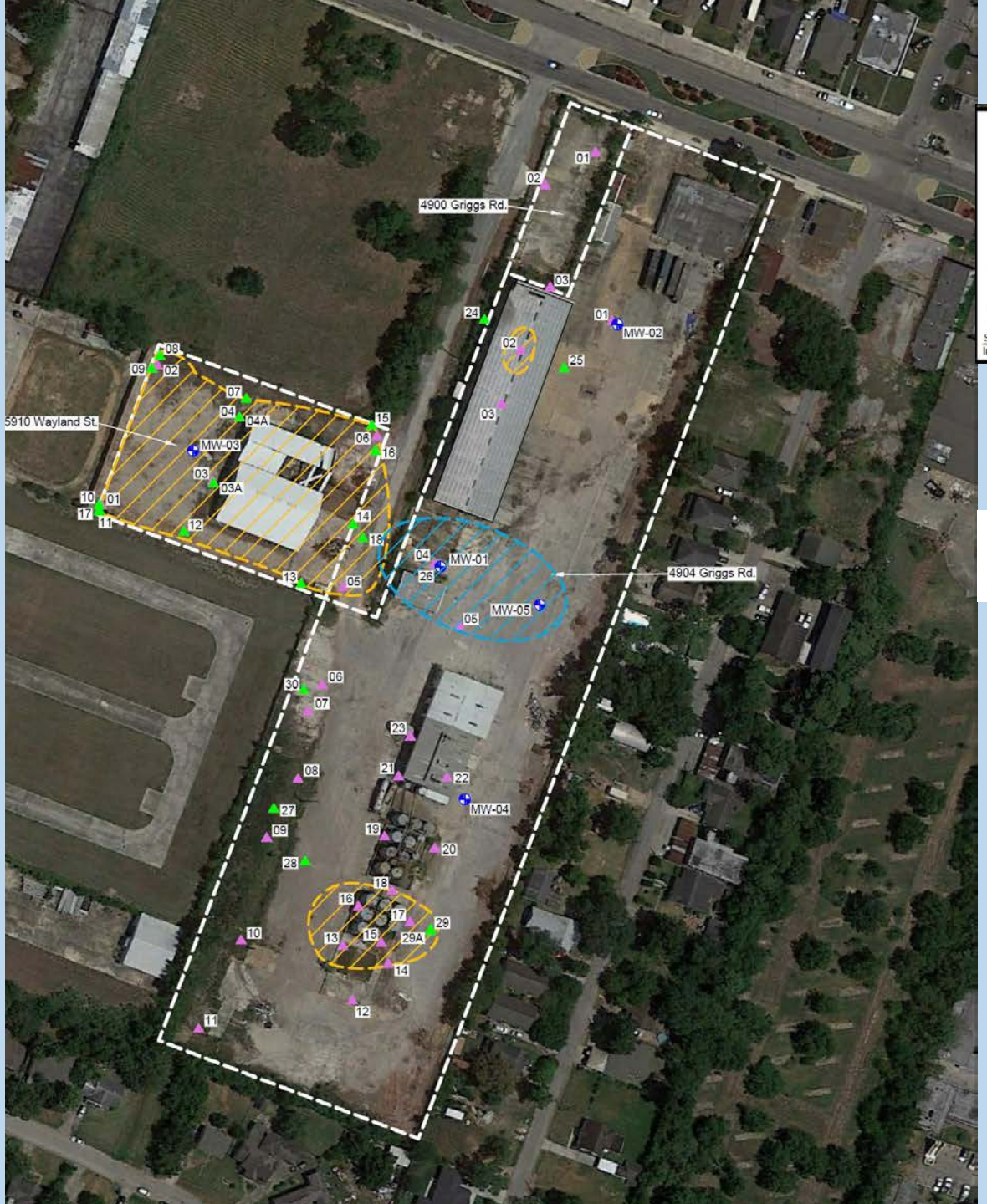

EXPLANATION

- Approx. Property Boundary
- PBW Sample Location - Phase I
- PBW Sample Location - Phase II
- PBW Monitoring Well Location
- Soil Affected Property
- Groundwater Affected Property

Source:
Imagery taken from Google Earth, photography dated July 31, 2015.

N

Scale in Feet
0 60 120

CES GRIGGS ROAD VCP SITE
HOUSTON, TEXAS

Figure 1B

AFFECTED PROPERTY MAP

PROJECT: 4020	BY: AJD	REVISIONS
DATE: MARCH, 2016	CHECKED: BB	

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Figure 1B shows the Site and areas where manganese, vanadium, benzo(a)pyrene, and petroleum hydrocarbon detected in soils and the CVOCs detected in groundwater exceed the TCEQ residential standards.

Statement in Affected Property Assessment Report

Five test wells looking for chlorinated volatile organic compounds (CVOC)

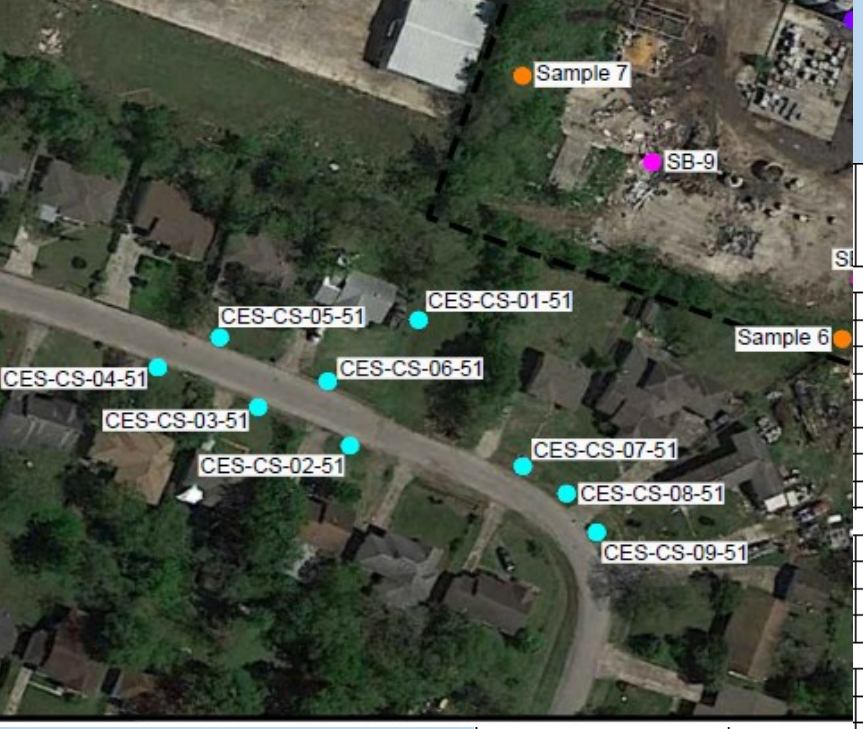
Found tetrachlorethene, trichloroethene, cis-1,2-dichloroethene and vinyle chloride @ concentrations
Higher than drinking water levels

Groundwater in site not used for drinking

Claim CVOCs not extend off-site

Possible that CVOCs from former dry cleaning operations in the area

Soil Data Sites



	$^{Tot}Soil_{Comb}$	$^{GW}Soil_{Ing}$	TSB1	TSB2	TSB3	CES-CS-01-51	CES-CS-02-51	CES-CS-03-51	CES-CS-04-51	CES-CS-05-51	CES-CS-06-51	CES-CS-07-51	CES-CS-08-51	CES-CS-09-51
			2 - 3 feet	1 - 2 feet	2 - 3 feet									
			12/21/2010	12/21/2010	12/21/2010	8/6/2014	8/6/2014	8/6/2014	8/6/2014	8/6/2014	8/6/2014	8/6/2014	8/6/2014	8/6/2014
	150	49	NA	NA	NA	**0.0091**	<0.00039	<0.00058	<0.00069	<0.00053	<0.00054	<0.00055	<0.00072	<0.00064
	110	53	NA	NA	NA	**0.0024 J**	<0.00091	<0.0013	<0.0016	<0.0012	<0.0013	<0.0013	<0.0017	<0.0015
	66000	43	<0.0059	<0.0062	<0.0066	**0.0711 J**	<0.0097	<0.014	<0.017	<0.013	**0.0303 J**	<0.014	<0.0018	**0.0194 J**
	4600	14	<0.0012	<0.0012	<0.0013	**0.0035 J**	<0.00056	<0.00083	<0.0010	<0.00077	<0.00078	<0.00080	<0.0010	<0.00092
	6400	7.6	<0.00059	<0.00062	<0.00066	**0.0133**	<0.00094	<0.0014	<0.0017	<0.0013	<0.0013	<0.0013	<0.0017	<0.0015
	40000	29	< 0.0022	< 0.0024	< 0.0025	**0.0262 J**	<0.0049	<0.0071	<0.0086	<0.0066	<0.0067	<0.0069	<0.0089	<0.0079
	5900	8.2	<0.00059	<0.00062	<0.00066	**0.0027 J**	<0.00099	<0.0015	<0.0017	<0.0013	<0.0014	<0.0014	<0.0018	<0.0016
	6000	120	<0.0012	<0.0012	<0.0013	**0.0186 J**	<0.0027	<0.0040	<0.0048	<0.0037	<0.0037	<0.0038	<0.0050	<0.0044
	5.7	60	NA	NA	NA	<0.082	<0.048	<0.059	<0.060	**0.115 J**	**0.0639 J**	<0.059	<0.062	<0.065
	43	160	NA	NA	NA	<0.260	<0.150	**0.235**	<0.190	**0.258**	<0.180	<0.180	<0.190	<0.210
	2300	1900	NA	NA	NA	<0.110	<0.063	<0.078	<0.078	**0.0836 J**	<0.076	<0.077	<0.081	<0.085
	1700	1100	NA	NA	NA	<0.150	<0.085	<0.100	<0.110	**0.119 J**	<0.100	<0.100	<0.110	<0.110
	65000	170000	NA	NA	NA	18,800	11,000	14,100	14,400	12,800	18,500	24,900	26,600	24,500
	15	5.4	NA	NA	NA	1.4 J	<0.55	0.33 J	0.32 J	0.36	0.46	0.24 J	0.13 J	0.26 J
Arsenic	5.9	24	5.0	4.6	3.3	4.32	6.8	8.4	2.1	2.5	2.8	2.9	3.4	4.0	3.7
Barium	300	8100	440	190	145	181	432	60.2	100	98.1	112	152	144	129	147
Beryllium	1.5	38	1.8	NA	NA	NA	2.7	0.55	0.55	0.86	1.1	1.5	1.1	1.2	1.5
Cadmium	---	52	1.5	0.219 J	0.0676 J	0.23 J	0.85 J	0.22 J	0.44	0.61	0.54	0.74	0.55	0.26 J	0.39
Calcium	---	---	---	---	NA	NA	NA	121,000	101,000	19,000	14,700	20,200	24,400	25,200	11,100	22,000
Chromium	30	33000	2400	21.6	14	21.5	34.2	11.1	15	18	16.5	23	25.3	25.2	25.8
Cobalt	7	400	220	NA	NA	NA	6.1	4.1	3.8	4.8	4.2	4.8	5.0	6.7	5.7
Copper	15	1300	1000	NA	NA	NA	48.4	10.2	16.2	17.5	20.9	22.3	17.3	14.9	18
Iron	15,000	---	---	NA	NA	NA	12,800	14,100	10,900	10,100	9,810	12,100	14,800	16,400	14,800
Lead	**15**	500	3.0	61.2	23.7	30.6	69.9	31	48.7	124	75.7	90.3	53.1	57.3	61.3
Magnesium	---	---	---	---	NA	NA	NA	2,710	1,450	2,000	1,830	1,830	2,360	2,730	2,800	2,870
Manganese	300	3900	3400	NA	NA	NA	288	100	145	198	184	207	184	199	327
Mercury	**0.04**	3.6	0.0078	0.0232	0.0161	0.0126	1.6	0.035	0.066	0.11	0.087	0.11	0.13	0.051	0.31
Nickel	10	840	160	NA	NA	NA	95.9	8.4	10.9	11.8	13.4	16.8	14.9	14.4	15.1
Potassium	---	---	---	---	NA	NA	NA	1,950	1,010	1,790	1,430	1,690	1,860	2,100	2,290	2,100
Selenium	0.3	310	2.3	0.736	0.98	1.2	1.9	1.6	0.71	0.73	0.57	0.44	0.6	0.69	0.79
Silver	---	97	0.48	0.12 J	0.0993 J	0.162 J	0.094 J	<0.042	<0.050	<0.050	0.13 J	<0.047	<0.049	<0.050	<0.057
Sodium	---	---	---	---	NA	NA	NA	465 J	316	160 J	167 J	207 J	211 J	306 J	152 J	123 J
Vanadium	50	76	880	NA	NA	NA	32.8	41.2	20.8	21.4	18.7	26.2	34.7	38.4	33.8
Zinc	30	9900	2400	NA	NA	NA	354	64.9	130	216	171	210	144	88.2	143
Total Petroleum Hydrocarbons by TX 1005															
TPH (>C12-C28)	---	2300	200	<19	<19	<23	234	<17	<20	<21	<19	<19	<20	<25	<24
TPH (>C28-C35)	---	---	---	<19	<19	<23	147	<17	<20	<21	<19	<19	<20	<25	<24
TPH (>C6-C35)	---	---	---	<19	<19	<23	381	<14	<16	<18	<16	<15	<17	<21	<20
Pesticides by Method 8081															
alpha-Chlordane	---	13	740	NA	NA	NA	<0.0071	**0.0033 J**	**0.0032 J**	<0.0010	**0.0024 J**	<0.0025	<0.0010	<0.0011	<0.0011
gamma-Chlordane	---	7.4	41	NA	NA	NA	<0.0075	<0.0022	<0.0027	<0.0011	<0.0025	<0.0027	**0.0012 J**	<0.0011	<0.0011

Source:
TCEQ VCP
Application

Groundwater Data

- Do Not Have Access to Site Groundwater Data from sources easily available to me

Current Status

A Response Action Plan (RAP) will be submitted to TCEQ upon approval of the CES Griggs Road VCP Site APAR. The RAP will describe the remedial activities proposed to address constituents detected at the Site. Pending development and implementation of the RAP, the CES Griggs Road PRP Group will implement quarterly groundwater monitoring to evaluate the stability of CVOC concentrations in Site groundwater.

Assessment

- Worst problems were resolved by the U.S. EPA
- Site currently in VCP at TCEQ –
  - very slow to no clean-up –
  - using risk assessment and land use concepts
- Hard to understand conclusions regarding groundwater issues
- No good analysis available about off-site storm water issues
- Blight on the community from a developmental standpoint if nothing else

Potential Future Action – Sense of Community Desires

- Become involved in the development of the work plan for the Response Action Plan (RAP)
  - Meet with agencies to determine their current willingness to require and/or undertake more remediation actions
  - Meet with Lubrizoil and/or other PRPs
  - Meet with City of Houston
- Initiate environmental justice research and contact EJ group at EPA
  - School and surrounding residential health issues
  - Economic
- Issue Notice of Intent To Sue under RCRA